

PATENT APPLICATION  
Docket No. D-2998

What is claimed is:

1. A telemedicine system comprising:
  - at least one remote exam module including,
    - a plurality of optical devices configured to examine a patient's eye, and a controller for collecting information from the plurality of optical devices and for controlling the examination of the patient's eye;
    - a diagnostic center for analyzing the collected information; and
    - a communications link for enabling communication and carrying the collected information between the diagnostic center and the at least one remote exam module;
    - wherein the diagnostic center comprises,
      - a database for maintaining records corresponding to the collected information,
      - and
      - an exam console for displaying images corresponding to the collected information.
2. The system of claim 1, wherein the communications link is an Internet connection.
3. The system of claim 1, further comprising computer means for analyzing the collected data and diagnosing conditions.

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4. The system of claim 1, wherein the information comprises at least one of the following:

fundus information;

posterior segment information;

refraction information;

neutralization of the habitual description;

tonometry information;

visual fields information;

blood pressure information;

anterior segment information;

corneal topography;

retinal information; or

**intraocular lens status.**

#### The system of claim 1

owing:

**fundus information;**

posterior segment info

refraction information;

neutralization of the habitual description;

tonometry information;

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visual fields information;  
blood pressure information;  
anterior segment information;  
corneal topography;  
retinal information; or  
intraocular lens status.

6. The system of claim 1, wherein a patient being examined in one of the at least one remote exam modules confers with an eye care professional in the diagnostic center via real-time teleconferencing.
7. The system of claim 1, wherein the at least one remote exam module includes a display unit for displaying a questionnaire to a patient for collection of patient history data.
8. The system of claim 7, wherein the display unit is provided with a touch-screen that allows the patient to enter responses to the questionnaire.
9. The system of claim 8, wherein the remote exam module includes a voice-activated input unit that receives verbal responses to the questionnaire.

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10. The system of claim 6, wherein the patient's case history is posted on a web site for access by a patient.
11. The system of claim 1, wherein the at least one remote exam module comprises instruments used in eye examinations, connected to outputs of the plurality of optical devices, for converting data provided by the outputs to a digital signal.
12. The system of claim 1, wherein the exam controller comprises a computer connected to the plurality of optical devices for controlling at least one operation of at least one of the optical devices.
13. The system of claim 1, wherein the exam controller controls the creation of an examination record in the database.
14. The system of claim 1, wherein the exam controller retrieves a patient record from the database.
15. The system of claim 1, wherein records in the database are accessed via a web interface.

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16. The system of claim 3, wherein the diagnosed conditions are included in a patient report sent to the patient via the communications link between the exam module and the central diagnostic center.
17. A method of conducting eye examination from a remote location, comprising:  
obtaining a patient's health and visual history information from a remote database;  
conducting tests by using optical devices;  
collecting information corresponding to the tests and provided by the optical devices; and  
transmitting the collected information to a diagnostic center.
18. The method of claim 17, further comprising:  
displaying images corresponding to the transmitted information; and  
diagnosing conditions by examining the images.
19. The method of claim 18, wherein displaying the images comprises displaying the images in real-time.
20. The method of claim 17, further comprising:  
conducting analysis of the transmitted data to diagnose conditions.

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21. The method of claim 17, further comprising:
  - updating the patient's health and visual history information to the database after the patient is tested and a diagnosis is produced.
22. The method of claim 17, further comprising:
  - transmitting to an exam module a diagnosis report based on the collected information and
  - providing the report to the patient.
23. The method of claim 17, further comprising:
  - exchanging real-time video using a teleconferencing system.
24. The method of claim 17, further comprising:
  - accessing records in the database through a world wide web interface.
25. The method of claim 17, wherein collecting information comprises collecting at least one of the following:
  - fundus information;
  - posterior segment information;
  - refraction information;
  - the patient's visual acuity;

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neutralization of the habitual prescription;  
tonometry information;  
visual fields information;  
blood pressure information;  
anterior segment information;  
corneal topography;  
retinal information; or  
intraocular lens status.

26. The method of claim 17, further comprising:  
analyzing the information collected.

27. The method of claim 17, wherein collecting information comprises collecting any combination of the following:

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fundus information;  
posterior segment information;  
refraction information;  
the patient's visual acuity;  
neutralization of the habitual prescription;  
tonometry information;  
visual fields information;

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                anterior segment information;  
                corneal topography;  
                retinal information; or  
                intraocular lens status.